

*Application No. 10/822581*  
*Page 2*

*Amendment*  
*Attorney Docket No. S63.2B-10865-US01*

**Currently Presented Claims:**

1. (Previously Presented) An article comprising a laminate having first and second layers and a tie-layer therebetween bonding the first and second layers, the first and second layers formed, respectively, of first and second polymer materials, the first and second polymer materials being different, wherein

the first and second polymer materials, respectively, have first and second functional groups thereon,

the tie layer is formed of a tie-layer polymer material obtained by melt modification of one of the first or the second polymer materials, said melt modification comprising incorporation therein of at least 5% by weight of a coupling agent, the coupling agent having functional groups thereon, at least some of which are reactive in the melt with at least the functional groups on the other of said first and second polymer materials, said coupling agent being selected from the group consisting of polyepoxides, polyoxazalines, polycarbodiimides, and polyisocyanates.

2. (Original) An article as in claim 1 wherein the coupling agent functional groups further comprise functional groups which are reactive in the melt with the functional groups of said one of the first and second polymer materials.

3. (Original) An article as in claim 1 wherein the tie layer polymer has been irradiatively crosslinked.

4. (Original) An article as in claim 1 wherein the first polymer material is a polyester.

5. (Original) An article as in claim 4 where the second polymer material is a polyolefin or a polyamide.

6. (Original) An article as in claim 5 wherein the tie layer polymer material is a modified polyolefin or polyamide.

7. (Original) An article as in claim 1 wherein the first polymer material is a polyester or

*Application No. 10/822581*  
Page 3

*Amendment*  
*Attorney Docket No. S63.2B-10865-US01*

a polyamide, the second polymer material is a polyolefin and the tie layer material is obtained by modifying the second polymer material.

8. (Original) An article as in claim 7 wherein at least a portion of the second polymer material and the tie-layer polymer material have been crosslinked after formation of the laminate.

9. (Cancelled)

10. (Original) An article as in claim 9 wherein the coupling agent is present in the tie layer material in an amount of from about 7% to about 35% by weight.

11. (Original) An article as in claim 1 wherein the coupling agent is incorporated into the tie layer material in an amount of 10-20% by weight.

12. (Previously Presented) An article comprising a laminate having first and second layers and a tie-layer therebetween bonding the first and second layers, the first and second layers formed, respectively, of first and second polymer materials, the first and second polymer materials being different, wherein

the first and second polymer materials, respectively, have first and second functional groups thereon,

the tie layer is formed of a tie-layer polymer material obtained by melt modification of one of the first or the second polymer materials, said melt modification comprising incorporation therein of at least 5% by weight of a coupling agent, the coupling agent having functional groups thereon, at least some of which are reactive in the melt with at least the functional groups on the other of said first and second polymer materials, the tie layer material further comprising a catalyst for reaction of the coupling agent with functional groups on said other of said first and second polymer materials.

13. (Original) An article as in claim 12 wherein the catalyst is selected from the group

*Application No. 10/822581*  
*Page 4*

*Amendment*  
*Attorney Docket No. S63.2B-10865-US01*

consisting of tri-valent phosphorous compounds, pentavalent phosphoric compounds, tin compounds, titanate compounds, tertiary amines, blocked amines, and mixtures thereof.

14-38. (Cancelled)

39. (Previously Presented) A laminate as in claim 41 wherein the coupling agent is present in the tie layer material in an amount of from about 7% to about 35% by weight.

40. (Previously Presented) A laminate as in claim 41 wherein the coupling agent is incorporated into the tie layer material in an amount of 10-20% by weight.

41. (Previously Presented) A laminate which comprises first and second layers of different polymers, with an adjoining tie layer between the first and second layers, wherein the tie layer is a melt modified product of one of the two different polymers and a coupling agent that is reactive with at least the other of the two different polymers the tie layer material further comprising a catalyst for reaction of the coupling agent with functional groups on said other of said first and second polymer materials.

42. (Previously Presented) A laminate as in claim 41 wherein the catalyst is selected from the group consisting of tri-valent phosphorous compounds, pentavalent phosphoric compounds, tin compounds, titanate compounds, tertiary amines, blocked amines, and mixtures thereof.

43. (Previously Presented) A laminate as in claim 41 wherein the coupling agent is incorporated into the tie layer material in an amount of about 0.5% or more.

44. (Previously Presented) A laminate as in claim 43 wherein the coupling agent is a member of the group consisting of anhydrides of polycarboxylic acids, polyepoxides, polyoxazalines, polycarbodiimides, and polyisocyanates.